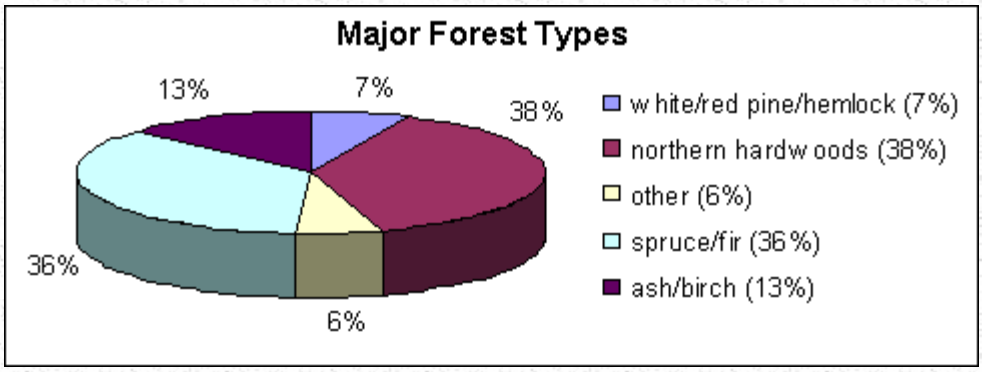
1996 Forest Health Highlights

Maine

The Resource

Maine's forests provide much of the raw materials to fuel its mills and serve as the backdrop for the recreation industry. These forest-based industries employ more than 12% of Maine's workforce and generate over 11% of the state's payroll. The overall annual contribution of the forest resource to Maine's economy exceeds $8.5 billion. The forests of the state also provide watershed, environmental, wildlife, and recreational benefits. Forested parks and individual shade trees provide similar amenities in urban and suburban settings.



- 90 % of the state is forested (17,689,000 acres)

Out of the forested area:

- 95.7 % timberland
- 4.3 % non commercial or reserved forestland

Special Issues

The primary forest resource issue of 1996 was how best to address public concern about current forestry practices and their impact on the condition and long-term **productivity and sustainability** of Maine's forests. This issue culminated in a ballot referendum in November on various prescriptions. However, because no option obtained a majority of the votes, a second vote is planned for November 1997. Groups on various sides of this issue are looking to results from the recently completed USDA Forest Service Inventory and Analysis Survey to support their positions.

Hardwood decline, brown ash decline, and spruce decline are recent concerns in Maine. The extensive areas of **hardwood decline** in northwestern Maine in 1994 and 1995 did not expand or intensify significantly in 1996. The condition of American beech in eastern Maine has been declining due to a number of factors including beech bark disease and the variable oakleaf caterpillar. Wet conditions in 1996 contributed to improvement in the appearance of ash and sugar maple. **Brown ash decline** appears to be subsiding as crowns are improving. Most trees are showing recovery with levels of dieback reported in 1996 less than 25 percent of 1993 levels.

Spruce decline is increasing in softwood stands in the coastal regions of Maine. Many of these islands and

headlands were cleared for farming in the 1800s and reverted back to spruce forest after 1900. The white spruce trees affected are 80 to 100 years old, growing on shallow, rocky soils that limit tree growth and longevity, and contribute to poor vigor. Factors affecting these stands include blowdown events, drought, recent hemlock looper defoliation, root rot, eastern dwarf mistletoe, and spruce beetle infestation. The beetle has caused more that 50 percent mortality of white spruce on some of the coastal islands, including Penobscot Bay islands and Isle Au Haut, which is a part of Acadia National Park.

Populations of the **yellow headed spruce sawfly** are intensifying across the state. Heaviest infestations appear to be restricted to two areas of western Maine, where approximately 2000 acres of black spruce plantations have been impacted. Damage ranges from scattered light defoliation on most plantations, to the worst case where 80 percent of the trees on a 30 acre plantation have been stripped of their foliage, resulting in some tree mortality.

Various other **insect defoliators** are at low levels of activity in the State. Gypsy moth defoliation was very localized with less than 100 acres in Penobscot County having greater than 30 percent leaf loss. The *Entomaphaga maimaiga* fungus which attacks the gypsy moth caterpillars is present in the state and is contributing to the insect mortality. The bruce spanworm population levels remain fairly stable. Defoliation was widely scattered over an area of 10,000 acres of hardwoods. The variable oakleaf caterpillar outbreak collapsed in 1996. The hemlock looper that previously affected more than 500,000 acres of hemlock, balsam fir, and white spruce in central Maine has ended. Spruce budworm populations remain at low levels, with no defoliation detected.

Other Issues

Populations of the **browntail moth** continue to infest 43 islands and portions of coastal mainland in the Casco Bay region. Within the generally infested area, 2,600 acres had defoliation on hardwood trees and shrubs which exceeded 30 percent. The larvae of this insect have glandular hairs which cause a severe rash in humans. A recent medical survey of 1,500 residents in the area revealed 84 percent experienced skin problems and 21 percent reported respiratory problems. The problems are expected to continue in 1997. **Lyme disease** continues at its relatively low level in Maine. Although the reported numbers of ticks increased significantly in 1996, the number of confirmed cases of lyme disease remains relatively stable.

In early 1996, there were several **windstorms** that caused blowdown in Maine. The areas were small and scattered, however, significant damage was detected in several central and northern counties, especially northern Penobscot and southern Aroostock Counties where 3,200 acres were affected. Weather was also a factor in the **browning of roadside white pine**, associated with winter applications of deicing salts. Most trees recovered, although lower branch mortality was commonly observed.

A variety of **tree diseases** occur in the State. Anthracnose diseases on ash, maple, and birch were very pronounced in 1996, due to the wet growing season. Birch was especially heavily defoliated. Ash leaf and twig rust was also severe in the Winterport area of coastal Maine. Dutch elm disease symptoms were more pronounced statewide in 1996, and many stately old elm specimens are succumbing to the new aggressive strain of the fungus that causes the disease.

Exotic pests are causing expanding problems in Maine and New England. Butternut canker has now been detected in 15 of the 16 counties in the state. The disease is widespread throughout the region, however some healthy trees have been located. Dogwood anthracnose has been confirmed from landscape trees in south coastal Maine. No expansion of the European larch canker has occurred recently and the quarantine continues. Surveys continue for the hemlock woolly adelgid, however the insect has not been located in the state. The nearest infestation is in northeastern Massachusetts. External quarantines continue in northern New England to control the spread of the insect.

Regional Surveys

Interest in regional forest condition prompted the implementation of the National Forest Health Monitoring Program and the North American Maple Project.

FOREST HEALTH MONITORING PROGRAM

The objective is to assess trend in tree condition and forest stressors. All of the New England States have been involved since the program was initiated in 1990. Results indicate that there has been minimal change in crown condition in the last 7 years. In 1996, 98.5 percent of trees greater than 5 inches diameter had normal crown fullness. About 97 percent of the trees had little or no crown dieback, and 78 percent showed no measurable signs of damage. The most common damage was decay indicators, which were more evident on hardwoods than softwoods. Additional surveys indicate there are concerns for individual species such as ash, butternut and hemlock due to various damage agents.

NORTH AMERICAN MAPLE PROJECT

This cooperative project with Canada was initiated in 1988 to look at change in sugar maple tree condition. There are several states in the Northeast involved including New York, New Hampshire, Vermont, Maine, and Massachusetts. Overall, sugar maple located within the sample sites are in good condition. Periodically, insect defoliation has affected crown condition in some areas. There was little difference found between sugarbush and non sugarbush stands.

For More Information

Maine Forest Service
State House Station
Station #22
Augusta, ME 04333

(207) 287-4981

Forest Health Protection
USDA Forest Service
P.O. Box 640
Durham, NH 03824

(603) 868-7709

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